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10/524,733	02/16/2005	Herbert Andre Jansen	15228-9US PTN/df	1570

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EXAMINER	
WEATHERBY, ELLSWORTH	
ART UNIT	**PAPER NUMBER**
3768	

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09/12/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/524,733	JANSEN, HERBERT ANDRE	
	Examiner	Art Unit	
	ELLSWORTH WEATHERBY	3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 May 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-5 and 9-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-5 and 9-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 4 is objected to because of the following informalities: Applicant claims that that the first of the passive detectable devices is displaceable *to at least a second position*. This is not consistent with parent claim 2's "no more than two stable positions." Further regarding claim 4, it is not clear what further structural limitation has been set forth. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 2-5 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicant claims, "…no more than two stable positions...". The Examiner is unable to identify a second stable position disclosed in the specification. The specification discloses a single stable position and a transient position that recoils back to the stable position unless held in place.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 2-5 and 9-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Franck et al. (USPN 6,529,765).

Franck et al. '765 (hereinafter Franck) teaches a passive optical interface apparatus for tracking by a tracking system of an object in space for position and orientation and for interacting with the tracking system (abstract), the passive optical interface apparatus comprising: at least three passive detectable devices trackable for position by the tracking system and a mounting device for receiving the at least three passive detectable (fig. 5, ref. 510,550,570,572) devices in a known geometry and adapted for being secured to the object such that a position and orientation of the object is calculable by the tracking system as a function of a tracking of the known geometry of the passive detectable devices (fig. 2; col. 5, ll. 24-67; col. 6, ll. 1-3), at least a first of the passive detectable devices being secured to the mounting device by a joint so as to be displaceable between no more than two stable positions with respect to the object, a displacement of said first of the passive detectable devices with respect to the object

being detectable to initiate an interaction with the tracking system while maintaining the tracking of the object (col. 5, l. 50- col. 6, l. 36; col. 16, ll. 7-34; Fig. 16). Franck further teaches that the apparatus comprises four of the passive detectable devices trackable for position by the tracking system (fig. 5, ref. 510,550,570,572), a second, a third and a fourth of the four passive detectable devices being positioned in said known geometry and the first of the four passive detectable devices being displaceable with respect to the known geometry (col. 5, l. 50- col. 6, l. 36), a displacement of any of the four passive detectable devices with respect to the known geometry being detectable to initiate an interaction with the tracking system and measured as changes in the segment lengths between the markers (col. 5, l. 50- col. 6, l. 36; col. 9, ll. 39-56; col. 16, ll. 7-34). Franck further teaches that each of the markers are measurable such that with any displacement the device's position and pose can be measured (col. 4, ll. 1-16)

6. Regarding claims 9-15, Franck teaches a method for interaction between a tracking system tracking a position and orientation of an object in space and a handler of the object, the object having at least three passive detectable devices with at least one of said at least three passive detectable devices being displaceable with respect to the object so as to define at least two detectable geometrical patterns (col. 5, l. 50- col. 6, l. 36), and comprising the steps of: tracking a position and orientation of the at least three passive detectable devices for calculating a position and orientation of the object as a function of the position and orientation of any one of the detectable geometrical patterns of at least three passive detectable devices (col. 5, l. 50- col. 6, l. 36; col. 9, ll.

39-56; col. 16, ll. 7-34); interpreting a displacement of said at least one of said at least three passive detectable devices with respect to the object as an interaction signal from the handler (col. 5, l. 50- col. 6, l. 36; col. 9, ll. 39-56; col. 16, ll. 7-34); and responding to the interaction signal by initiating an interaction response to the handler (col. 16, ll. 26-35). Franck further teaches that the apparatus comprises four of the passive detectable devices trackable for position by the tracking system (fig. 5, ref. 510,550,570,572), a second, a third and a fourth of the four passive detectable devices being positioned in said known geometry and the first of the four passive detectable devices being displaceable with respect to the known geometry (col. 5, l. 50- col. 6, l. 36). Franck also teaches that the change is a displacement of a first of the passive detectable devices between a first and a second position, the detectable device having four of the passive detectable devices, with the first geometrical pattern being a second, a third and a fourth of the passive detectable devices in a known geometry and the first of the passive detectable devices in the first position with respect to the known geometry, and with the second geometrical pattern being the second, the third and the fourth of the passive detectable devices in the known geometry and the first of the passive detectable devices being in the second position with respect to the known geometry, the known geometry being fixed to the object such that the position and orientation of the object is calculated as a function of the position and orientation of the known geometry (col. 5, l. 50- col. 6, l. 36; col. 6, ll. 45-67; col. 13, ll. 53-59). Franck further teaches that each of the markers are measurable such that with any displacement the device's position and orientation can be measured (col. 4, ll. 1-16).

Response to Arguments

7. Applicant's arguments filed 05/27/2008 have been fully considered but they are not persuasive. Applicant alleges LEDs 550 and 572 are part of two different devices. However, the examiner included each of the references, (510, 550, 570, and 572), merely to highlight that Franck makes multiple disclosures of passive detectable devices and, furthermore, Franck teaches referencing the location of an object 510 having LED's in surgical space. This serves the same function as reference 710. The purpose for citing references 510 and 550 will be clarified in the discussion below.

8. With reference to Figure 9, LED 742, which is displaceable relative to LEDs 730, is attached to the tracking object by clamp 1133. Thus, by tracking the position of LED 742 relative to LEDs 730, the surgeon can estimate the depth of the tip of the surgical instrument because the positions of LEDs 730 are known in surgical space (col. 16, ll. 26-35). Accordingly and absent any discussion in the specification regarding the meaning of stable position, the Examiner is interpreting the limitation, displaceable by not more than two stable positions to be met. Also the claimed *joint* does not require that the LED be displaceable about that joint. In this regard the two stable positions would inherently be the maximum and minimum operational positions of instrument LED 742 allowed by instrument drive platform 1130. The Examiner also notes that not more than two stable positions includes zero stable positions. Furthermore, by outputting the depth of the surgical instrument on workstation 580, the system outputs an interaction response to the handler, which is initiated by the movement of LED 742. The position of

the end of the surgical instrument is not related to a variation of the position and orientation of the object 1110 as object 1110 is adjustably mounted to the skull. To clarify, LEDs 730 and LED 742 are all coupled to the instrument drive mechanism (col. 16, ll. 26-35). Collectively the system disclosed in figure 16 satisfies the limitation, mounting device or object. Thus, the mounting device's position is known in space and a variation in relative position between LED's 730 and LED 742 is outputted to a surgeon who uses visual feedback corresponding to the depth of the end of a surgical device to adjust the depth of the instrument. Accordingly, claims 2-5 and 9-15 stand rejected under Franck et al. (USPN 6,529,765).

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELLSWORTH WEATHERBY whose telephone number is (571) 272-2248. The examiner can normally be reached on M-F 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on (571) 272-49564956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ruth S. Smith/
Primary Examiner, Art Unit 3737

EW